

WHAT IS CLAIMED IS:

1           1. An arrangement for combining narrowband and  
2 broadband transport mechanisms in a communications network,  
3 comprising:

4                 a first node, said first node configured to provide  
5 call control functions;

6                 a second node, said second node connected to said  
7 first node by at least one link, said second node configured  
8 to provide connection control functions, said second node  
9 adapted to rely on said first node for call control  
10 functions; and

11                 wherein data information and signaling information  
12 are transmitted over the at least one link.

1           2. The arrangement according to claim 1, wherein the  
2 at least one link comprises a first link and a second link,  
3 and whereby the data information is transmitted over the  
4 first link, and the signaling information is transmitted over  
5 the second link.

1           3.    The arrangement according to claim 2, wherein the  
2   first link comprises a time division multiplexed (TDM) link,  
3   and the second link comprises an ethernet link.

1           4.    The arrangement according to claim 2, wherein the  
2   at least one link further comprises a third link, and whereby  
3   the signaling information is also transmitted over the third  
4   link, the signaling information being transmitted from said  
5   first node to said second node over the second link and from  
6   said second node to said first node over the third link.

1           5.    The arrangement according to claim 2, wherein  
2   neither the data information nor the signaling information  
3   is identified as such.

1           6.    The arrangement according to claim 1, wherein said  
2   first node is further configured to provide connection  
3   control functions and is adapted to route a communication  
4   incoming to said second node as an outgoing communication  
5   from said first node by directing the communication over the  
6   at least one link, the communication including data  
7   information.

1           7.    The arrangement according to claim 1, wherein said  
2   first node is further connected to a first time division  
3   multiplexed (TDM) network, and said second node is further  
4   connected to a second TDM network and an asynchronous  
5   transfer mode (ATM) network.

1           8.    The arrangement according to claim 1, wherein said  
2   first node includes a synchronous transfer mode (STM) switch,  
3   and said second node includes an asynchronous transfer mode  
4   (ATM) switch.

1           9.    The arrangement according to claim 1, wherein call  
2    control functions comprise switching intelligence of a  
3    telecommunications node, and connection control functions  
4    comprise switching fabric of a telecommunications node.

1           10. A dual-node system for combining narrowband and  
2    broadband transport mechanisms in a communications network,  
3    comprising:

4                a first node, said first node configured to provide  
5    call control functions;

6                a second node, said second node connected to said  
7    first node by at least one link, said second node configured  
8    to provide connection control functions and adapted to  
9    transmit data information and signaling information over the  
10   at least one link; and

11               wherein said first node and said second node  
12   function as a single logical node within the communications  
13   network.

1           11. The dual-node system according to claim 10, wherein  
2    the at least one link comprises a first link and a second  
3    link, and whereby the data information is transmitted over  
4    the first link, and the signaling information is transmitted  
5    over the second link.

1           12. The dual-node system according to claim 10, wherein  
2    an incoming communication to said second node over a  
3    broadband transport mechanism is forwarded from the single  
4    logical node as an outgoing communication from said first  
5    node over a narrowband transport mechanism responsive to a  
6    traffic determination made by said first node.

1           13. The dual-node system according to claim 10, wherein  
2    the single logical node comprises a hybrid switch.

1           14. A telecommunications system comprising:  
2               a first node, said first node configured to provide  
3   call control functions;  
4               a second node, said second node configured to  
5   provide connection control functions and capable of receiving  
6   telecommunications data, said second node adapted to rely on  
7   said first node for call control functions;  
8               a first link for connecting said first node with  
9   said second node, said first link for transporting signaling  
10   information associated with the received telecommunications  
11   data between said second node and said first node; and  
12              a second link for connecting said first node with  
13   said second node, said second link for transporting the  
14   received telecommunications data between said first node and  
15   said second node.

1           15. The telecommunications system according to claim  
2   14, further comprising a third link, said third link for  
3   connecting said first node with said second node, said third  
4   link for transporting call control information from said  
5   first node to said second node for controlling the received  
6   telecommunications data; and wherein said first link is for  
7   transporting the signaling information associated with the  
8   received telecommunications data from said second node to  
9   said first node.

1           16. The telecommunications system according to claim  
2   14, wherein said first node is further connected to an  
3   intelligent network (IN) node, and said second node is  
4   further connected to a time division multiplexed (TDM)  
5   network and an asynchronous transfer mode (ATM) network.



1           17. A telecommunications arrangement comprising:  
2               a control node for providing call control  
3 instructions;  
4               another node for receiving telecommunications data  
5 and relying on the call control instructions received from  
6 the control node to route the received telecommunications  
7 data;  
8               a signaling link for communicating signaling  
9 information associated with the received telecommunications  
10 data from said another node to said control node; and  
11              a call control link for communicating at least one  
12 call control instruction from said control node to said  
13 another node, the at least one call control instruction  
14 generated as a result of processing the communicated  
15 signaling information.

1           18. The telecommunications arrangement according to  
2 claim 17, wherein said another node comprises at least one  
3 of an access node and a broadband switching node.

1           19. The telecommunications arrangement according to  
2   claim 17, further comprising:  
3           a data link for communicating the received  
4   telecommunications data between said another node and said  
5   control node.

1           20. A method for combining narrowband and broadband  
2   transport mechanisms in a communications network, comprising  
3   the steps of:  
4           providing a first node having call control  
5   functionality;  
6           providing a second node having connection control  
7   functionality;  
8           sharing, by the first node, the call control  
9   functionality with the second node;  
10          transmitting, by the second node, data information  
11   related to a communication to the first node; and  
12          transmitting, by the second node, signaling  
13   information related to the communication to the first node.

1           21. The method according to claim 20, wherein said step  
2 of transmitting, by the second node, signaling information  
3 related to the communication to the first node comprises the  
4 step of:

5                 piping the signaling information through the second  
6 node and from the second node to the first node without  
7 reformatting.

1           22. The method according to claim 20, further  
2 comprising the steps of:

3                 receiving, by the first node, the signaling  
4 information related to the communication from the second  
5 node;

6                 analyzing, by the first node, the signaling  
7 information related to the communication to make a traffic  
8 routing determination; and

9                 transmitting, by the first node, a routing  
10 instruction that is based on the traffic routing  
11 determination to the second node.

1           23. The method according to claim 20, wherein said step  
2 of transmitting, by the second node, data information related  
3 to a communication to the first node comprises the step of  
4 transmitting, by the second node, the data information  
5 related to the communication to the first node via a first  
6 link and said step of transmitting, by the second node,  
7 signaling information related to the communication to the  
8 first node comprises the step of transmitting, by the second  
9 node, the signaling information related to the communication  
10 to the first node via a second link.

1           24. The method according to claim 20, wherein said step  
2 of transmitting, by the second node, data information related  
3 to a communication to the first node comprises the step of:  
4           transmitting, by the second node, the data  
5 information related to the communication to the first node  
6 without indicating whether the transmitted information  
7 corresponds to data information or signaling information.

1           25. A method for combining narrowband and broadband  
2 transport mechanisms in a communications network, comprising  
3 the steps of:

4           receiving, at a first node, a communication, the  
5 communication including data information and signaling  
6 information;

7           sending, by the first node, the signaling  
8 information to a second node;

9           processing, by the second node, the signaling  
10 information to produce at least one routing instruction;

11           sending, by the second node, the at least one  
12 routing instruction to the first node; and

13           sending, by the first node, the data information  
14 to the second node responsive to the at least one routing  
15 instruction.

1           26. The method according to claim 25, further  
2 comprising the step of:

3           forwarding, by the second node, the communication  
4 to another node.

1           27. The method according to claim 26, wherein the first  
2 node includes a broadband switch, and the second node  
3 includes a narrowband switch; and wherein said step of  
4 forwarding, by the second node, the communication to another  
5 node comprises the step of forwarding, by the second node,  
6 the communication to the another node using a narrowband  
7 transport mechanism; and wherein said step of receiving, at  
8 a first node, a communication comprises the step of  
9 receiving, at the first node, the communication on a  
10 broadband transport mechanism.

1           28. The method according to claim 25, wherein said step  
2 of sending, by the first node, the signaling information to  
3 a second node comprises the step of sending, by the first  
4 node, the signaling information to the second node over a  
5 first link, and wherein said step of sending, by the first  
6 node, the data information to the second node responsive to  
7 the at least one routing instruction comprises the step of  
8 sending, by the first node, the data information to the  
9 second node over a second link.

1           29. The method according to claim 25, wherein the first  
2 node includes a broadband switching fabric, and the second  
3 node includes a narrowband switching fabric and a switching  
4 intelligence.

1           30. The method according to claim 29, wherein the first  
2 node relies on the switching intelligence of the second node  
3 by responding to routing instructions.